Catalogue of American Amphibians and Reptiles.

AUFFENBERG, WALTER AND RICHARD FRANZ. 1978. *Gopherus polyphemus*.

Gopherus polyphemus (Daudin)
Gopher tortoise

Testudo polyphaemus Bartram, 1791:18. Nomen nudum.

Testudo polyphemus Daudin, 1802:256. Type-locality, "bords de la riviere Savanna et pres de l'Alatamah"; restricted by Schmidt (1953) to "vicinity of Savannah [Chatham Co.], Georgia." No type specimen designated.

Testudo depressa Guerin-Meneville, 1829:5. Type-locality, "l'Amerique septentrionale." No type specimen designated.

Testudo gopher Gray, 1844:4. Type-locality, "N. America," restricted by Schmidt (1953) to "vicinity of Savannah [Chatham Co.], Georgia. Two syntypes presumably in the British Museum (Natural History).

Xerobates carolinus Agassiz, 1857:447. Type-locality, not precisely stated. No type specimen designated.

Gopherus carolinus: Shaler, 1888:37.

Gopherus polyphemus: Stejneger, 1893:161. First use of combination.

Gopherus praecedens Hay, 1916:55. Type-locality, "Vero St. Lucie County (Florida), Pleistocene." Holotype: Florida Geol. Surv. 5463, a left xiphiplastron, no collector stated. Type examined by senior author.

Gopherus polyphemus polyphemus: Mertens and Wermuth, 1955:371. See Auffenberg and Franz (1978).

• CONTENT. No subspecies are recognized.

• DEFINITION. Adults are 200–400 mm in carapace length, with a low, oval shell, the sides tending to become somewhat parallel in large specimens, very flat on top, the margins not greatly flared on the lateroposterior border; gular projections are obtuse, short, and only slightly notched anteriorly at the midline. Ossicles of the forelimbs are moderately large, flattened and never fused; antibrachial scales are juxtaposed, rarely even slightly keeled. The front foot is considerably flattened and wide. The axillary scale is trapezoidal or triangular. Head width ranges from 53–78% of hind foot width. Shell ground color is yellowish-white in hatchlings, darking to brown to brownish-black in old specimens, sometimes faintly marbled; younger individuals have lighter areolae. Marginal scutes are usually uniformly dark in adults, except in western part of range, where they are often marbled with brownish-yellow. The plastron is usually immaculate yellow but in the western parts of the range, it may possess darker rays or marbling.

Females tend to be smaller, with less concave plastron, a shorter gular projection, and a short, blunt tail terminating at the level of the cloaca. The longer, more acute tail of the male has a terminal enlarged scale.

• DESCRIPTIONS. For general accounts, see Carr (1952), and Ernst and Barbour (1972). Skull morphology is discussed by Kilias (1957), Ray (1959), and Auffenberg (1976); skeleton by Auffenberg (1976); os transiliens by Ray (1959), Patterson (1973a), and Bramble (1974); shell abnormalities by Auffenberg (1976); scutellation abnormalities by Douglass (1977b); eggs and young by Neill and Allen (1957), and Arata (1958); and penial morphology by Zug (1966).

• ILLUSTRATIONS. Carr (1952) and Ernst and Barbour (1972) are good sources of photographs. Hatchlings are illustrated in Neill and Allen (1957) and Arata (1958), and much of the skeleton in Auffenberg (1976).

• DISTRIBUTION. The main part of the range is from central Florida to southcentral Georgia in areas of well-drained sandy soils in open forests and savannas. Beyond this central region, more scattered colonies extend to the Fall Line in Georgia and Alabama, on the Atlantic Coast north to southeastern South Carolina, and south to southern Florida, and on the Gulf Coast west to southeastern Louisiana. Records from Fort Smith, Arkansas, and Jefferson County, Texas are apparently errors (see Dellinger and Black [1938] and Raun and Gehlbach [1972]).

• FOSSIL RECORD. *Gopherus polyphemus* occurs in the Middle to Late Pleistocene of Florida (many unpublished localities; see Hay [1930] and Holman [1958, 1959] for a few that have reached the literature) and Late Pleistocene of South Carolina (specimens examined by senior author). Closely related (perhaps conspecific) populations occur in the Pleistocene of Kansas (Preston, 1971) and Texas (specimens examined by senior author). The Late Pleistocene or Recent *Gopherus praecedens* (Hay, 1916) is a synonym of *G. polyphemus* (Auffenberg, 1974).

• PERTINENT LITERATURE. Douglass (1975, 1977a) provides extensive bibliographies on living *Gopherus*. A few examples are listed here. Symbiotic relationships: Young and Goff (1939), Carr (1952). Habits: Hallinan (1923), Carr (1952), Brode (1959), Hansen (1963), Auffenberg and Weaver (1969). Predators: Douglass and Weingarner (1977). Growth: Pearse, Lepokovsky, and Hintze (1925), Goin and Goff (1941). Courtship: Auffenberg (1966). Physiology: Bogert and Cowles (1947), Cantrell (1964), Sullivan and Riggs (1967a–c), Thorson (1968), Spray and May (1972), Ross (1977). Mental gland secretions: Rose et al. (1969). Parasites: Knipling (1937), Yamaguti (1961), Schad et al. (1964), Jackson and Jackson (1971), Wilson and Baker (1972). Nesting: Hallinan (1923), Kenefick (1954). Circadian rhythm: Gourley (1972). Thermal characteristics: Hutchison et al. (1966). Association with salt water areas: Neill (1958). Ecology: Hallinan (1923), Carr (1940, 1952). Bouyancy: Patterson (1973b). Effects of gassing: Speake and Mount (1973). Sound production: Hallinan (1923). Archaeological site remains: Atkins and MacMahon (1967), Milanich (1973).

• ETYMOLOGY. *Polyphemus* is from Greek mythology, the cave dwelling giant in the Iliad.

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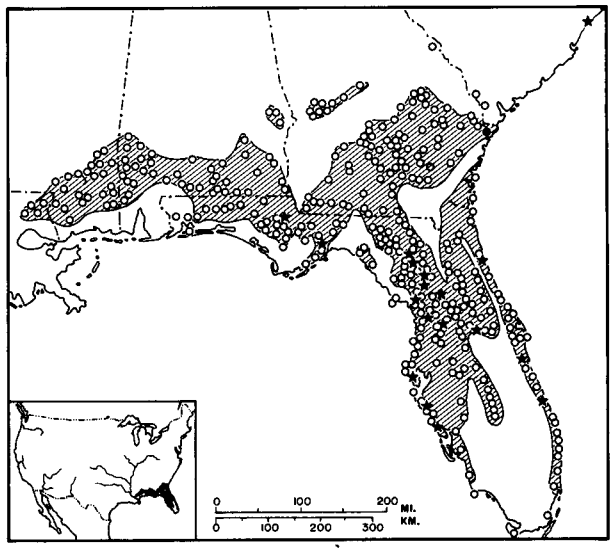

MAP. Solid circle marks the restricted type-locality, open circles indicate other localities; stars mark Pleistocene fossil sites.

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